CLAIMS

1. A method of providing water comprising:

passing a first water stream through a depleting compartment of an electrochemical device to produce a second water stream having an LSI less than about 0;

passing the second water stream through a cathode compartment of the electrochemical device to produce a third water stream, the third water stream being less corrosive than the first water stream and having an LSI of less than about 0.

2. The method of claim 1 wherein corrosivity of the second water stream is reduced by passing the water through the cathode compartment.

3. The method of claim 2 wherein the third water stream is made less corrosive by reducing the concentration of oxidative species in the water stream.

4. The method of claim 1 wherein the electrochemical device comprises an electrodeionization device.

5. A method of providing potable water comprising:

passing a first water stream through a cathode compartment of an electrochemical device to produce a second water stream;

passing the second water stream through a depleting compartment of an electrochemical device to produce a third water stream having an LSI less than about 0, the third water stream being less corrosive than the first water stream.

6. The method of claim 5 wherein corrosivity of the first water stream is reduced by passing the water through the cathode compartment.

7. The method of claim 6 wherein the third water stream is made less corrosive by reducing the concentration of oxidative species in the water stream.

8. The method of claim 5 wherein the electrochemical device comprises an electrodeionization device.

9. A method of retaining a residual chlorine level in water comprising:

removing greater than 90% of active chlorine from a first water stream;

passing the water stream through a depleting compartment of an electrochemical device;

removing a portion of any ions dissolved in the water stream;

introducing the water stream to a loop, the loop including a storage vessel; and

introducing active chlorine in a second water stream into the loop at a rate adequate to maintain an effective average chlorine concentration in the loop.

10. The method of claim 9 wherein the effective chlorine concentration is greater than 25% of the chlorine concentration in the first water stream.

11. A method of selectively retaining ions in a water supply comprising:

passing a feed water through a depleting compartment of an electrochemical device, the feed water comprising monovalent and divalent ions;

removing at least 30% of the divalent ions from the feed water and retaining at least about 80% of a species selected from silica, boron and fluoride, to produce a treated water; and

supplying the treated water for household consumption.

12. A method of producing a purified water comprising:

passing a water stream through a depleting compartment of an electrochemical device; and

adjusting a voltage applied to the electrochemical device to control the current passing through the electrochemical device at a level adequate to remove greater than about 25% of any hardness ions in the water stream and inadequate to remove greater than about 10% of any fluoride or silica species from the water stream.

13. The method of claim 12 wherein less than 10% of any fluoride species is removed.

14. The method of claim 12 wherein less than 10% of any silica species is removed.

15. The method of claim 12 further comprising passing the purified water through the depleting compartment a second time.

16. The method of claim 12 wherein the electrochemical device comprises an electrodeionization device.

17. The method of claim 12 wherein the electrochemical device comprises an electrodialysis device.

18. A method comprising:

passing a feed water through a bed of ion exchange material to remove greater than 30% of any hardness ions from the feed water to produce a softened water;

supplying the softened water for household consumption; and

discharging a concentrated solution comprising calcium, wherein the sum of the ionic content of the softened water and the ionic content of the concentrated solution is no greater than the total ionic content supplied by the feed water.

19. The method of claim 18 wherein the softened water is less corrosive than the feed water.

20. The method of claim 18 further comprising applying an electric current across the bed of ion exchange material.